## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

## LISTING OF CLAIMS:

1. (Original) A method for automatically detecting an edge of a document in a scanning system, comprising the steps of:

(a) scanning a portion of the document to obtain a set of image data;

(b) calculating a set of first values from the image data using a first function, the first function being a first-order function;

(c) calculating a set of second values from the image data using a second function, the second function being a second-order function;

(d) determining a first slope value, the first slope value being a function of the difference between a plurality of the first values;

(e) determining a second slope value, the second slope value being a function of the difference between a plurality of the second values; and

(f) determining a detected edge of the document from the first slope value and the second slope value.

2. (Original) The method according to claim 1, wherein step (f) comprises:

(f1) computing a product of the first slope value and the second slope value; and

(f2) generating a block sum value, the block sum value comprising the sum of a plurality of second values.

3. (Original) The method according to claim 1, further comprising:

(g) calculating a set of third values from the image data, each one of the third values being a fourth-order statistic;

(h) determining a second detected edge of the document from the set of third values; and

(i) reconciling the detected edge and the second detected edge to obtain the document edge.

4. (Original) The method according to claim 3, wherein step (h) comprises:

(h1) determining a third slope value, the third slope value being a function of the difference between a plurality of the third values;

wherein the second detected edge is identified from the third slope value.

5. (Original) The method according to claim 1, further comprising:

(g) calculating a plurality of block values, each block value comprising a mean of a plurality of first values; and

(h) verifying the detected edge using the plurality of neighbor block values.

6. (Original) The method according to claim 5, wherein step (g) comprises:

(g1) calculating a first block value, the first block value comprising a mean of a first plurality of first values;

(g2) calculating a second block value, the second block value comprising a mean of a second plurality of first values; and

(g3) computing a first block difference value, the first block difference value comprising an arithmetic difference between the first block value and the second block value;

wherein step (h) verifies the detected edge when the first block value is greater than a first block difference threshold.

7. (Currently Amended) A method for automatically detecting an edge of a document in a scanning system, comprising the steps of:

(a) scanning a portion of the document to obtain a set of image data;

(b) calculating a set of first values from the image data using a first function, the first function being a second-order function;

(c) determining a first slope value, the first slope value being a function of the difference between a plurality of the first values;

(d) generating a block sum value, the block sum value comprising the sum of a plurality of first values; and

~~(f)~~ (e) determining a detected edge of the document from the first slope value and the block sum value.

8. (Cancelled)

9. (Currently Amended) The method according to claim ~~1~~ 7, further comprising:

~~(g)~~(f) calculating a set of second values from the image data using a second function, the second function being a fourth-order function;

~~(h)~~(g) determining a second detected edge of the document from the set of second values; and

~~(i)~~(h) reconciling the detected edge and the second detected edge to obtain the document edge.

10. (Currently Amended) The method according to claim 9, wherein step ~~(h)~~(g) comprises:

~~(h1)~~ (g1) determining a second slope value, the second slope value being a function of the difference between a plurality of the second values; wherein the second detected edge is identified from the ~~third~~ second slope value

11. (New) A method for detecting an edge within scanned image data, comprising the steps of:

calculating a set of first values from the scanned image data using a first function, the first function being a second-order function;

determining a slope value, the slope value being a function of the difference between a plurality of the first values;

generating a block sum value, the block sum value comprising the sum of a plurality of the first values; and

determining a detected edge of a document from the slope value and the block sum value.

12. (New) The method according to claim 11, further comprising:

calculating a set of second values from the scanned image data using a second function, the second function being a fourth-order function;

determining a second detected edge from the set of second values; and

reconciling the detected edge and the second detected edge to identify a document edge.

13. (New) The method according to claim 12 wherein the step of determining a second detected edge includes determining a second slope value, the second slope value being a function of the difference between a plurality of the second values.